

ABSTRACT OF THE DISCLOSURE

A solid-state imaging device is provided, in which both a reduction in a read voltage and enhancement of a transfer efficiency are satisfied. A p type well 507 is formed on an n type semiconductor substrate 506, and a CCD channel region 102 is formed on a surface region of the p type well 507. A gate insulating film 510 is formed on a surface of the CCD channel region 102, and first electric charge transfer electrodes 503 are formed on the gate insulating film 510. An interlayer insulating film 511 is formed on circumferences of the first electric charge transfer electrodes, and second electric charge transfer electrodes 504 are formed between the first electric charge transfer electrodes on the gate insulating film 510. An electrode length L1 of the second electric charge transfer electrodes 504 is longer than an electrode length L2 of the first electric charge transfer electrodes 503, and n^- type potential level difference regions 113 are formed in upstream side portions of the CCD channel region under the second electric charge transfer electrodes 504 by p type impurity implantation.